

## CLAIMS

What is claimed is:

1. A method of adjusting the shutter speed of a digital camera, comprising:

- 2                   measuring the motion blur in an image;  
                    maximizing the shutter speed when the motion blur exceeds a  
4                   predetermined amount.

2. The method of claim 1, further comprising:

- 2                   capturing at least two frames;  
                    comparing at least two frames to determine the amount of motion blur  
4                   in the image.

3. The method of claim 1 where the shutter speed is not increased when an aperture  
2                   is already open at its maximum size.

4. The method of claim 2 where the two frames are compared using the absolute  
2                   value of the difference between the corresponding pixels from the two frames.

5. The method of claim 2 where the two frames are compared using a general two-  
2                   dimensional Taylor series expansion.

6. The method of claim 2 where two frames are compared using template matching.

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7. The method of claim 2 where the two frames are captured immediately before the  
2 final image is captured.

8. A digital camera, comprising:

2 a photo sensor;

a lens that forms an image on the photo sensor;

4 a shutter with an adjustable speed that controls the length of time the  
photo sensor sees the image;

6 a processor configured to measure the amount of motion blur in the  
image, the processor configured to maximize the speed of the shutter when the  
8 motion blur exceeds a predetermined amount.

9. The device of claim 7, further comprising:

2 a processor configured to capture at least two frames from the photo  
sensor and compare at least two frames to determine the amount of motion  
4 blur between the two frames.

10. The device of claim 7, further comprising:

2 a processor configured not to increase the shutter speed when an  
aperture is already at its maximum opening.

11. A digital camera, comprising:

2 a photo sensor;

a lens that forms an image on the photo sensor;

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- 4 a shutter with an adjustable speed that controls the length of time the  
photo sensor sees the image;
- 6 a means for detecting blur in a scene;
- a means for adjusting the shutter speed in response to the blur detected.

12. A method of adjusting the shutter speed of a digital camera, comprising:

- 2 measuring the motion blur in an image;
- setting the shutter speed as a function of the amount of motion blur.

13. The method of claim 1, further comprising:

- 2 capturing at least two frames;
- comparing at least two frames to determine the amount of motion blur
- 4 in the image.

14. The method of claim 12 where the shutter speed is not increased when an aperture

- 2 is already open at its maximum size.

15. The method of claim 13 where the two frames are compared using the absolute

- 2 value of the difference between the corresponding pixels from the two frames.

16. The method of claim 13 where the two frames are compared using a general two-

- 2 dimensional Taylor series expansion.

17. The method of claim 13 where two frames are compared using template matching.

18. The method of claim 13 where the two frames are captured immediately before  
the final image is captured.

19. A digital camera, comprising:

a photo sensor;  
a lens that forms an image on the photo sensor;  
a shutter with an adjustable speed that controls the length of time the  
photo sensor sees the image;  
a processor configured to measure the amount of motion blur in the  
image, the processor configured to set the speed of the shutter as a function of  
the amount of motion blur.

20. The device of claim 7, further comprising:

a processor configured to capture at least two frames from the photo  
sensor and compare at least two frames to determine the amount of motion  
blur between the two frames.